MAG910 Troubleshooting

arkon flow systems

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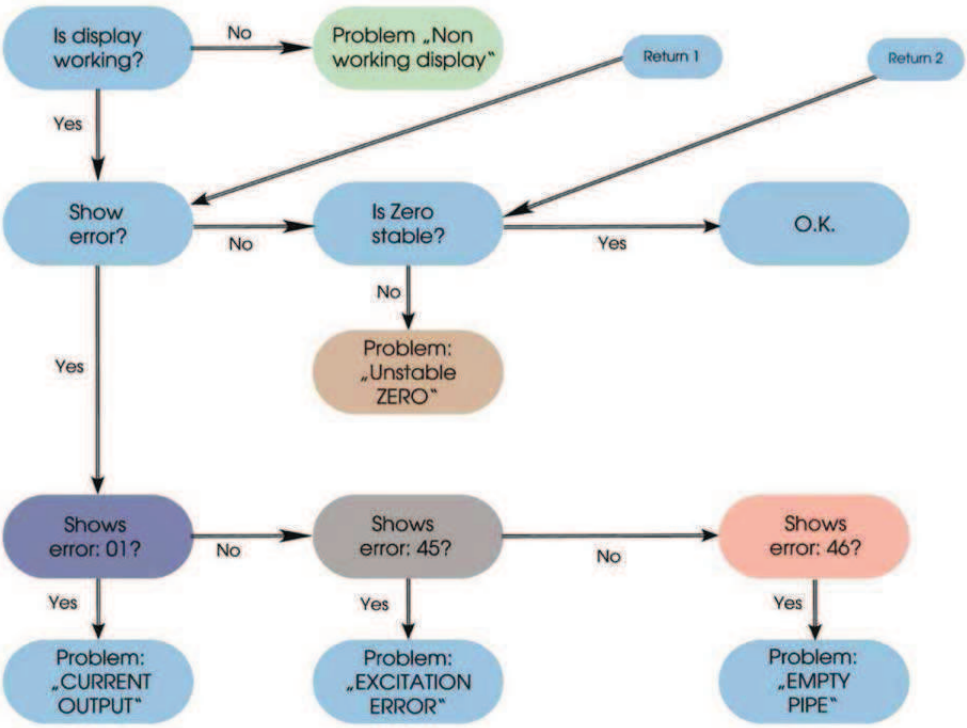
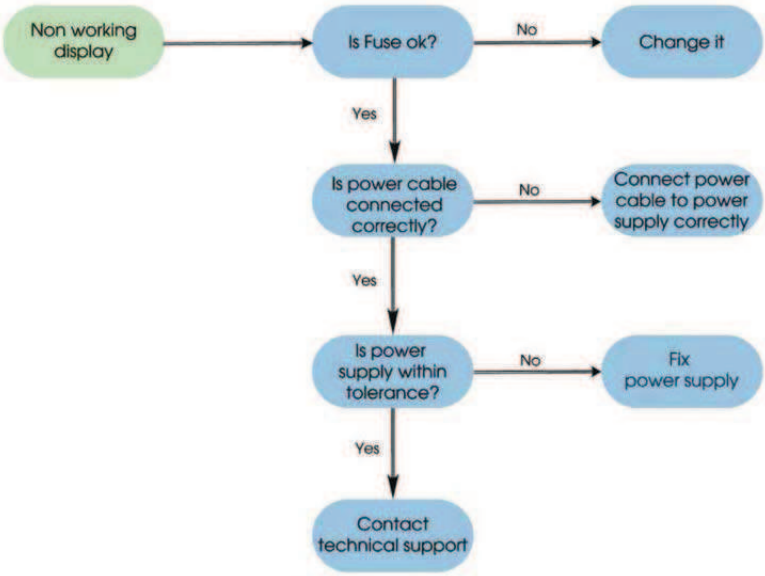
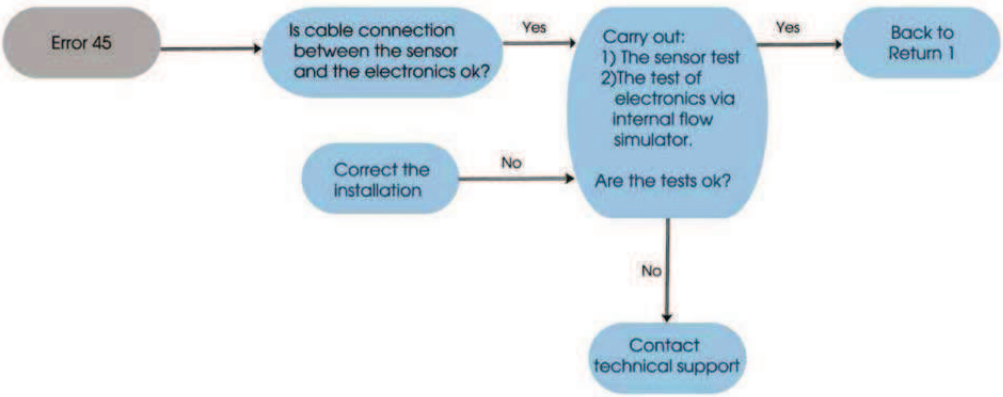


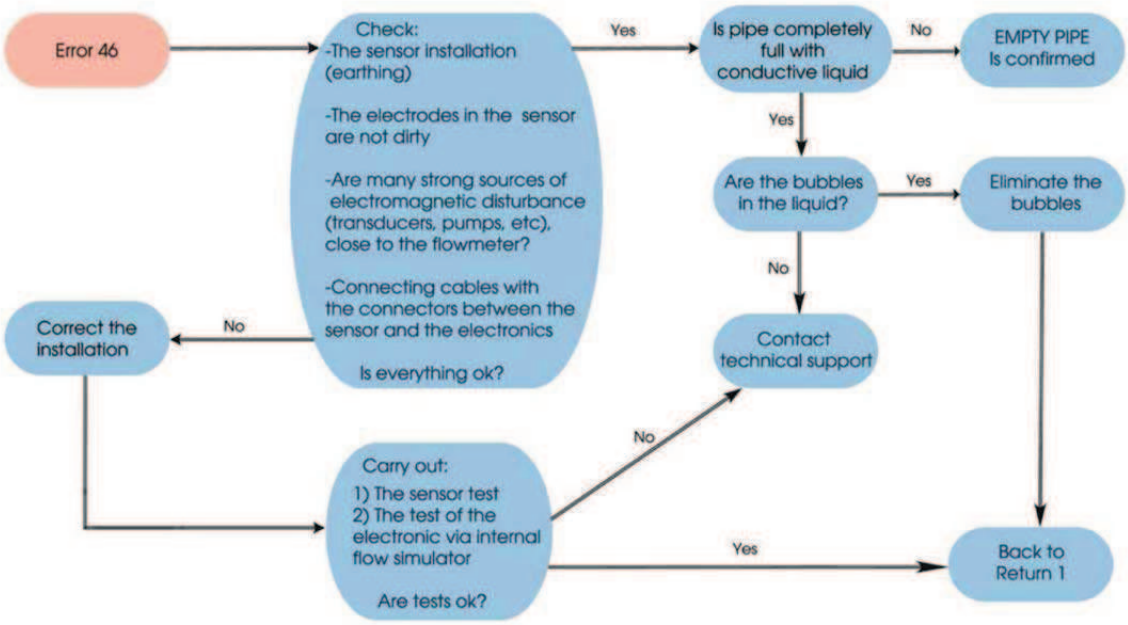
Problem solution: NON WORKING DISPLAY



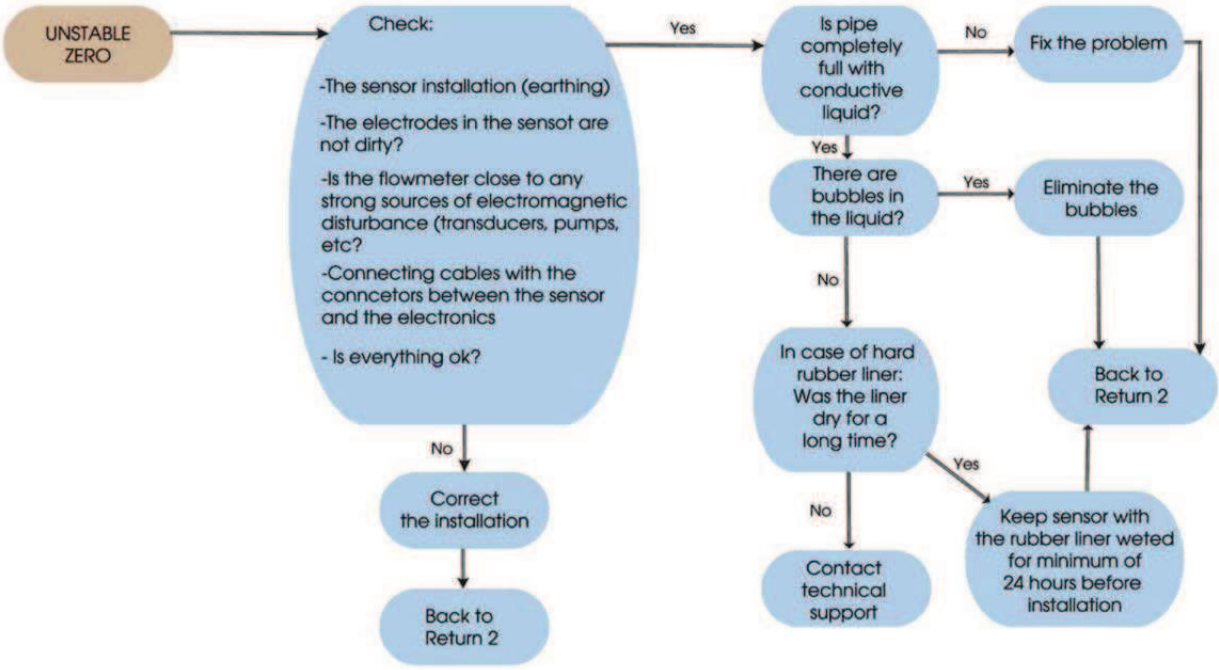
Problem solution: Error 45 / EXCITACION ERROR



Problem solution: Error 46 / EMPTY PIPE



Problem solution: UNSTABLE ZERO


UNSTABLE ZERO
Check:
-The sensor installation (earthing)
-The electrodes in the sensot are not dirty?
-Is the flowmeter close to any strong sources of electromagnetic disturbance (transducers, pumps, etc?
-Connecting cables with the conncetors between the sensor and the electronics
- Is everything ok?
Yes
Is pipe completely full with conductive liquid?
No
Fix the problem
Yes
There are bubbles in the liquid?
Yes
Eliminate the bubbles
No
In case of hard rubber liner: Was the liner dry for a long time?
Yes
Keep sensor with the rubber liner weted for minimum of 24 hours before installation
No
Contact technical support
Back to Return 2
No
Correct the installation
Back to Return 2

In case, the data for fully filled pipe and standing flow is stable, however not zero and all above mentioned instructiones are met, please set zero via program Flow910

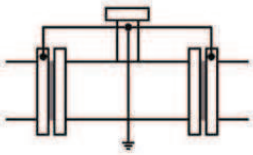
Mag 910 Installation Information

1. **Sensor position**

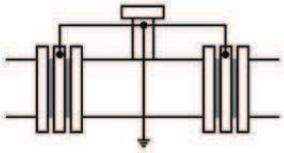
Ensure the sensor is positioned correctly. The pipe must be full at all times with liquid. Exact recommendation for the right position of the sensor can be found in the manual.
Ensure the flowmeter is not exposed to high temperatures of direct sunlight by correct positioning or a sun protection cover.

2. **Flowmeter earthing**

For the correct operation it is necessary to have the flowmeter properly earthed. For earthing use a copper conductor with a cross sectional area with a minimum of 1.5mm2. The place for connecting the conductor must be cleaned of any rust or other nonconductive films. If the flowmeter is connected to electrically conductive pipe, just connect the earthing point placed on the neck of the flowmeter to the flanges of the connecting pipe on both sides of the flowmeter. In case, the pipe is not electrically conductive it is necessary to use earthing rings.



Conductive pipe



Non-conductive pipe

3. **Connecting cables (housing)**

The outer diameter of the connecting cables must be within the range of 6 - 8mm. It is necessary for keeping IP 67 protection of the whole housing.
After cable installation pass the cable through the sleeves (grommets)

4. **Jumper cables between sensor and electronics (remote version)**

Use standard supplied cables. These cables have the correct diameter, resistance and shielding againts noise.
Dont extend the jumper cables. If required use a new set of cables.
After cable installation of the junction box, pot it with the sealant which is the standard part of the delivery.

5. **Sealing of the flowmeter**

For keeping the IP 67 protection, IP 68 for the sensor for remote version it is necessary to ensure:
Correct installation of the cable ensuring the cable glands/grommets are tight.
Correct installation of the front and back covers are tight. Please use the special key, which is a standard part of the delivery.
Potting of the junction boxes of the remote version with a sealant .
Correct mounting of the junction box lid of the remote version.. Be careful that the lid is not turned by 90° (the sealing is not then guaranteed).

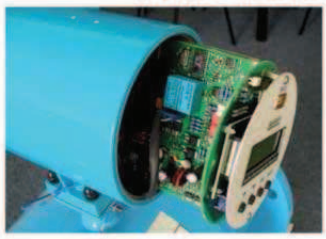
Mag910 Sensor Test

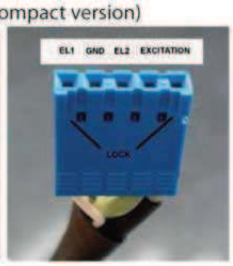
Connectors

Mag910 terminal strip (remote version):

1	2	3	NC	5	6
EL1	GND	EL2		EXCITATION	

Mag910 connector (compact version)





Comments:
- For tests 1 and 3, you need an Ohmmeter with a measurement range of 0-20 MΩ. Measurement Voltage has to be more than 5V.
- Before testing, it is necessary to connect terminal strip no. 2 (GND) to the grounding screw on the neck of the sensor.

	Check resistance:	Expected Value:	Probable cause if different value:
1	**- 1 x 2 (EL1 x GND)** **- 3 x 2 (EL2 x GND)**	**1 kΩ to 1 MΩ** With a full sensor tube **> 1 MΩ** With an empty sensor tube	**Lower value:** Short-circuit on the electrode **Higher value:** If the value with a full sensor tube is higher, the electrode is not connected.
2	**- 5 x 6 (EXCITATION)**	**30 to 100 Ω**	**Lower value:** Short-circuit on the excitation coils **Higher value:** Disconnected or interrupted excitation.
3	**- 5 x 2** **- 6 x 2**	**> 10 MΩ**	**Lower value:** Coils not isolated from the sensor body

If measured values are outside mentioned limits:
1. Check connectors and cables to be sure there is no short circuit or disconnected cable from the connector.
2. For compact version check the sensor's connector. It should be connected in right position (check the lock position of the connector).